



Sheet 4 of 4 sheet(s)

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. APPM/5351	Serial No. 09/885,609
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Applicant MAK, et al.	Confirmation No.: 5337
(Use several sheets if necessary)		Filing Date June 20, 2001	Group 2818
Examiner Berry, Renee R.			

U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
MD	A37	2002/0004293	01-10-2002	SOININEN, et al.	438	584	05-15-2001
MD	A38	2001/0054769	12-27-2001	RAAIJMAKERS, et al.	257	758	04-26-2001
MD	A39	2001/0029094	10-11-2001	MEE-YOUNG, et al.	438	597	09-16-1999
MD	A40	2001/0024387	09-27-2001	RAAIJMAKERS, et al.	365	200	02-22-2001
MD	A41	2001/0009695	07-26-2001	SAANILA, et al.	427	255.39	01-18-2001
MD	A42	2001/0002280	05-31-2001	SNEH	427	255.28	12-22-2000

Foreign Patent Documents

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OTHER ART

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
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	C3	

Examiner MD Date Considered 11-10-03

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*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
<i>MS</i>	A1	6,548,424	04/15/03	Putkonen	438	785	04/16/01
<i>MS</i>	A2	6,534,395	03/18/03	Werkhoven, et al.	438	627	03/06/01
<i>MS</i>	A3	6,511,539	01/28/03	Raaijmakers, et al.	117	102	09/08/99
<i>MS</i>	A4	6,468,924	10/22/02	Lee, et al.	438	763	05/31/01
<i>MS</i>	A5	6,458,701	10/01/02	Chae, et al.	438	680	10/12/00
<i>MS</i>	A6	6,416,577	07/09/02	Suntolo, et al.	117	88	06/07/00
<i>MS</i>	A7	6,399,491	06/04/02	Jeon, et al.	438	680	04/06/01
<i>MS</i>	A8	6,372,598	04/16/02	Kang, et al.	438	399	06/16/99
<i>MS</i>	A9	6,348,376	02/19/02	Lim, et al.	438	253	01/19/01
<i>MS</i>	A10	6,342,277	01/29/02	Sherman	427	562	04/14/99
<i>MS</i>	A11	6,333,260	12/25/01	Kwon, et al.	438	643	06/24/99
<i>MS</i>	A12	6,287,965	09/11/01	Kang, et al.	438	648	02/23/00
<i>MS</i>	A13	6,207,487	03/27/01	Kim, et al.	438	238	10/12/99
<i>MS</i>	A14	6,197,683	03/06/01	Kang, et al.	438	643	09/18/98

Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
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<i>MS</i>	B1	02/45167	06/06/02	WO	H01L	27/00	<input type="checkbox"/>	<input type="checkbox"/>
<i>MS</i>	B2	02/067319	08/29/02	WO	H01L	21/768	<input type="checkbox"/>	<input type="checkbox"/>
<i>MS</i>	B3	00/79576	12/28/00	WO	H01L	21/205	<input type="checkbox"/>	<input type="checkbox"/>

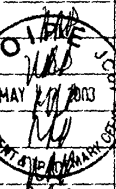
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<i>MS</i>	C1	Rosnagel, et al. "Plasma-enhanced Atomic Layer Deposition of Ta and Ti for Interconnect Diffusion Barriers," J. Vacuum Sci. & Tech. B., Vol. 18, No. 4 (July 2000), pp. 2016-20
<i>MS</i>	C2	Ritala, et al. "Atomic Force Microscopy Study of Titanium Dioxide Thin Films Grown by Atomic Layer Epitaxy," Thin Solid Films, Vol. 228, No. 1-2 (15 May 1993), pp.32-35
Examiner	<i>R. Berry</i>	Date Considered <i>11-18-03</i>




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	A1	6,042,652	03/28/00	Hyun, et al.	117	719	09/07/99
	A2	5,526,244	06/11/96	Bishop	362	147	05/24/93
	A3	2003/0082300	05/01/03	Todd, et al.	427	255.27	02/11/02
	A4	2003/0072975	04/17/03	Shero, et al.	428	704	09/26/02
	A5	2003/0049942	03/13/03	Haukka, et al.	438	778	08/22/02
	A6	2003/0032281	02/13/03	Werkhoven, et al.	438	640	09/23/02
	A7	2003/0031807	02/13/03	Elers, et al.	427	569	09/17/02
	A8	2003/0013320	01/16/03	Kim, et al.	438	778	05/31/01
	A9	2002/0187631	12/12/02	Kim, et al.	438	637	12/05/01
	A10	2002/0187256	12/12/02	Elers, et al.	427	99	07/30/02
	A11	2002/0182320	12/05/02	Leskela, et al.	427	250	03/15/02
	A12	2002/0177282	11/28/02	Song	438	300	12/18/01
	A13	2002/0135071	09/26/02	Kang, et al.	257	767	01/16/02
	A14	2002/0121697	09/05/02	Marsh	257	751	04/30/02

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*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
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	B1	00/15865	03/23/00	WO	C23C	16/00	<input type="checkbox"/>	<input type="checkbox"/>
	B2	99/29924	06/17/99	WO	C23C	16/04	<input type="checkbox"/>	<input type="checkbox"/>
	B3	99/01595	01/14/99	WO	C30B	25/14	<input type="checkbox"/>	<input type="checkbox"/>

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*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.
	C1 Ritala, et al. "Growth of Titanium Dioxide Thin Films by Atomic Layer Epitaxy," Thin Solid Films, Vol. 225, No. 1-2 (25 March 1993) pp. 288-95
	C2 Min, et al. "Chemical Vapor Deposition of Ti-Si-N Films With Alternating Source Supply," Mat. Rec. Soc. Symp. Proc. Vol. (1999)

Examiner *Mak* Date Considered *11/10/03*

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U.S. Patent Documents

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<i>MB</i>	A1	2002/0109168	Kim, et al.	257	295	01/30/02
<i>MB</i>	A2	2002/0106536	Lee, et al.	428	702	02/02/01
<i>MB</i>	A3	2002/0105088	Yang, et al.	257	774	10/31/01
<i>MB</i>	A4	2002/0081844	Jeon, et al.	438	680	02/28/02
<i>MB</i>	A5	2002/0076837	Hujanen, et al.	438	3	11/28/01
<i>MB</i>	A6	2002/0076507	Chiang, et al.	427	569	10/24/01
<i>MB</i>	A7	2002/0074588	Lee	257	306	07/06/01
<i>MB</i>	A8	2002/0061612	Sandhu, et al.	438	151	01/14/02
<i>MB</i>	A9	2002/0048635	Kim, et al.	427	331	08/08/99
<i>MB</i>	A10	2002/0021544	Cho, et al.	361	200	08/07/01
<i>MB</i>	A11	2002/0000598	Kang, et al.	257	301	07/26/01
<i>MB</i>	A12	2001/0054730	Kim, et al.	257	301	05/23/01
<i>MB</i>	A13	2001/0050039	Park	117	102	06/05/01
<i>MB</i>	A14	2001/0028924	Raaijmakers, et al.	365	200	02/22/01

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*Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation	
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<i>MB</i>	B1	98/51838	WO	C23C	16/06	<input type="checkbox"/>	<input type="checkbox"/>
<i>MB</i>	B2	2001-111000	JP	H01L	29/00	<input type="checkbox"/>	<input type="checkbox"/>
<i>MB</i>	B3	2,355,747	GB	C23C	16/44	<input type="checkbox"/>	<input type="checkbox"/>

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<i>MB</i>	C1 Klaus, et al. "Atomically Controlled Growth of Tungsten and Tungsten Nitride Using Sequential Surface Reactions," Applied Surface Science, 162-163 (2000) 479-491
<i>MB</i>	C2
Examiner <i>MBerry</i>	Date Considered <i>11-10-03</i>

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*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
MA	A1	6,482,740	11-19-2002	SOININEN, et al.	438	686	05-15-2001
MA	A2	6,482,733	11-19-2002	RAAIJMAKERS, et al.	438	633	04-26-2001
MA	A3	6,482,262	11-19-2002	ELERS, et al.	117	84	10-13-2000
MA	A4	6,475,910	11-05-2002	SNEH	438	685	09-22-2000
MA	A5	6,475,276	11-05-2002	ELERS, et al.	117	84	10-13-2000
MA	A6	6,455,421	09-24-2002	ITOH, et al.	438	656	07-31-2000
MA	A7	6,451,695	09-17-2002	SNEH	438	685	12-22-2000
MA	A8	6,451,119	09-17-2002	SNEH, et al.	118	715	11-29-2000
MA	A9	6,447,933	09-10-2002	WANG, et al.	428	635	04-30-2001
MA	A10	6,432,821	08-13-2002	DUBIN, et al.	438	678	12-18-2000
MA	A11	6,423,619	07-23-2002	GRANT, et al.	438	589	11-30-2001
MA	A12	6,420,189	07-16-2002	LOPATIN	438	2	04-27-2001
MA	A13	6,391,785	05-21-2002	SATTA, et al.	438	704	08-23-2000

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MAK	A14	6,369,430	04-09-2002	ADETUTU, et al.	257	382	04-02-2001
MAK	A15	6,368,954	04-09-2002	LOPATIN, et al.	438	627	07-28-2000
MAK	A16	6,358,829	03-19-2002	YOON, et al.	438	597	09-16-1999
MAK	A17	6,355,561	03-21-2002	SANDHU, et al.	438	676	11-21-2000
MAK	A18	6,284,646	09-04-2001	LEEM	438	629	08-19-1998
MAK	A19	5,989,623	11-23-1999	CHEN, et al.	427	97	09-19-1997
MAK	A20	5,972,179	10-26-1999	CHITTIPEDDI, et al.	204	192.17	09-30-1997
MAK	A21	5,306,666	04-26-1994	IZUMI	437	192	07-21-1993
MAK	A22	2002/0190168	12-19-2002	HALL, et al.	248	188.7	05-20-2002
MAK	A23	2002/0162506	11-07-2002	SNEH, et al.	118	715	06-28-2002
MAK	A24	2002/0155722	10-24-2002	SATTA, et al.	438	704	04-15-2002
MAK	A25	2002/0117399	08-29-2002	CHEN, et al.	205	125	02-23-2001

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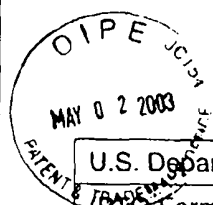
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MB	A26	2002/0106846	08-08-2002	SEUTTER, et al.	438	200	02-02-2001
MB	A27	2002/0105088	08-08-2002	YANG, et al.	257	774	10-31-2001
MB	A28	2002/0090829	07-11-2002	SANDHU, et al.	438	761	01-21-2002
MB	A29	2002/0086507	07-04-2002	PARK, et al.	438	585	12-26-2001
MB	A30	2002-0076507	06-20-2002	CHIANG, et al.	427	569	10-24-2001
MB	A31	2002/0061612	05-23-2002	SANDHU, et al.	438	151	01-14-2002
MB	A33	2002-0055235	05-09-2002	AGARWAL, et al.	438	430	10-29-2001
MB	A34	2002/0048880	04-25-2002	LEE	438	253	08-08-2001
MB	A35	2002/0037630	03-28-2002	AGARWAL, et al.	438	430	10-29-2001
MB	A36	2002/0031618	03-14-2002	SHERMAN	427	569	10-09-2001
MB		2002/0019121	02-14-2002	PYO	438	618	06-20-2001

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